

Remarks

The non-final Office Action dated June 16, 2009, lists the following rejections: claims 1-2 and 9-10 stand rejected under 35 U.S.C. § 102(b) over Planger (U.S. Patent No. 6,407,727); claim 3 stands rejected under 35 U.S.C. § 103(a) over the '727 reference in view of Ito (U.S. Patent No. 6,538,629); and claims 4-8 stand rejected under 35 U.S.C. § 103(a) over the '727 reference in view of Rodeschini (EP 1341150). In the following discussion, Applicant traverses all rejections, and does not acquiesce in any regard to averments in this Office Action (unless Applicant expressly indicates otherwise).

The § 102(b) and § 103(a) rejections should be removed because the Office Action has not established that the '727 reference, upon which all rejections rely, corresponds to the claimed invention. Using claim 1 as an example, the Office Action has failed to cite correspondence to aspects of the claimed invention directed to selectively applying column voltages that are a mirrored version of a previously-applied column voltage in a previous time slot, or to (selectively) applying the mirrored version based upon the voltages at the end of each respective time slot. In contrast, the cited portions (Figures 3b-3f and 8) of the '727 reference show *row* selection signals, not *column* selection signals as claimed. The pulses in Figures 3b-3f show a signal that is simply repeated for "successively" selecting rows where "all selection pulses ... are diminished in width by said amount." As such, the pulses 3b-3f are not mirrored. The "mirroring" shown in Figure 8 and cited at column 4 is also directed to a repeated row selection signal as well, and the mirroring is not based upon the respective column voltages (or any voltages) at the end of successive selection times. Applicant has reviewed the entire '727 reference and cannot ascertain any other mention of the term "mirror" or any disclosure regarding the application of a mirrored waveform in the context of driving column voltages.

In view of the above, the Office Action has failed to establish correspondence between the '727 reference and multiple limitations of independent claim 1 under § 102. The Office Action has also failed to establish correspondence to similar limitations of independent claims 9 and 10, also rejected under § 102. Accordingly, as all the § 102 and § 103 rejections are based upon these cited portions of the '727 reference, via which the Office Action has failed to establish correspondence to the claimed invention, Applicant

submits that all rejections are improper and must be removed. While further discussion of the rejections of the dependent claims is believed unnecessary, the rejections of certain claims are further addressed below.

Referring to claim 2, the Office Action's assertion that the cited repeated row voltage application as shown in Figures 8 and described at column 4:7-14 corresponds to claim limitations directing to mirroring a column voltage waveform "if" the column voltages at the end of subsequent selection times are the same is untenable. While the Office Action cites to respective voltage levels that may happen to be at the same level at the end of subsequent time periods, this happenstance fails to disclose the claimed approach to selectively mirroring a waveform "if" the voltages match (e.g., actively using the matching to control the application of a voltage). Applicant notes that this lack of correspondence not only renders the rejection of claim 2 inapplicable, it further exemplifies the lack of correspondence to the newly-added claims discussed below.

Further regarding the § 103 rejections, and in addition to the aforesaid lack of correspondence, the Office Action has failed to establish motivation for modifying the primary '727 reference, because the proposed combination of references does not achieve the result upon which the motivation is based, and further because the primary reference appears to teach away from the proposed modification. Specifically, it appears that the alleged motivation in each instance relies upon some "lower power consumption" (page 6) or related rationale, yet fails to provide any explanation whatsoever as to how such a goal would be achieved. For example, adding the '629 reference's calculation of voltages, rather than using the '727 reference's consistently-applied voltage (column 3:17-18) would appear to introduce computational time and power consumption. This proposed combination of references would thus appear to not only fail to lower power consumption, it would appear to actually increase power consumption. The proposed combination of the '150 reference with the '727 reference would appear to suffer similar increases in power consumption, by introducing additional grey level calculations on a column-by-column basis.

The proposed combinations of references are therefore further improper because the '727 reference teaches away from the combination and from the resulting increase in power consumption. Consistent with the recent Supreme Court decision in *KSR*, M.P.E.P. § 2143.01 explains the long-standing principle that a § 103 rejection cannot be

maintained when the asserted modification undermines either the operation or the purpose of the main reference - the rationale being that the prior art teaches away from such a modification. *See KSR Int'l Co. v. Teleflex, Inc.*, 127 S. Ct. 1727, 1742 (2007) ("[W]hen the prior art teaches away from combining certain known elements, discovery of a successful means of combining them is more likely to be non-obvious."). Here, adding a voltage computation step to each time period in the '727 reference would increase power consumption, in direct contrast to the '727 reference's stated purpose. Under M.P.E.P. § 2143.01, the rejections cannot be maintained.

Applicant has added new claims 11-18. Support for these claims may be found throughout the specification and figures, with exemplary embodiments described at paragraphs 0014, 0015, and 0017, and shown and described in connection with Figures 5a-8b. Applicant believes these claims to be allowable over the cited references for reasons including those stated above, and further because the references fail to disclose, teach or suggest (alone or in combination) limitations including those directed to a driver circuit arrangement that selectively mirrors a voltage waveform applied to subsequent timing cycles, and to mirroring such a waveform based upon voltage comparisons and other adaptive conditions.

Minor amendments have also been made to the claims as previously presented, for stylistic purposes (e.g., to use the word "comprising"), to improve readability (spacing, punctuation) and correct informalities (e.g., changing "the" to "a"). Applicant believes that these minor amendments are unnecessary for patentability over the cited references, and further believe that the scope of the claims is consistent with that of the claims, prior to amendment.

In view of the above, Applicant believes that each of the rejections is improper and should be withdrawn and that the application is in condition for allowance. Should there be any remaining issues that could be readily addressed over the telephone, the Examiner is asked to contact the agent overseeing the application file, Aaron Waxler, of NXP Corporation at (408) 474-9063 (or the undersigned).

Please direct all correspondence to:

Corporate Patent Counsel
NXP Intellectual Property & Standards
1109 McKay Drive; Mail Stop SJ41
San Jose, CA 95131

CUSTOMER NO. 65913

By: 
Name: Robert J. Crawford
Reg. No.: 32,122
Eric J Curtin
Reg. No. 47,511
651-686-6633
(NXPS.632PA)